

DIHYDROBENZOFURAN DERIVATIVES

O. Wichterle and M. Hladický. Collection Czechoslov. Chem. Commun. 12, 875-884(1947) (in French).—2-Acetyltetrahydrobenzofuran-3-carboxylic acid (27 g.) was heated with 9 g. NaOAc; repeated fractionation yielded 1^a, dihydrobenzofuran (I), b.p. 88°, d₄²⁰ 1.0175, n_D²⁰ 1.53860; semicarbazone m. 211-12° (decomps.); phenylhydrazones, m. 120°. From 6-acetyltetrahydro-2-tetralone and NaOAc, heated at about 200°, was obtained 15% dihydro-2-tetralone (II), b.p. 84°. The major reaction product of AcOCH=CHCH=CH₂ and MeCH=CHCHO (III) heated 3 hrs. at 180° was II, b.p. 87.5°. From 280 g. III, 284 g. AcOCH=CHCH=CH₂ and 60 g. NaOAc refluxed 3 hrs. was obtained II, b.p. 80-82°, n_D²⁰ 1.53010, d₄²⁰ 0.9845; semicarbazone m. 207°; phenylhydrazones m. 82-4° (from alc.). I and maleic anhydride resulted in 1-formylbicyclo-[2.2.2]-5-pentene-2,3-dicarboxylic anhydride (IV), m. 122°; semicarbazone m. 201-6° (decomps.). II and maleic anhydride gave the 7-Me deriv. of IV, m. 108-9°.

M. O. Webb

ABB-3LA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSING AND PROPERTIES INDEX

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Colorimetric analysis of oximes, ketones, and hydrazines. O. Wichterle and M. Hudlicky (Inst. recherches établissement, Bata A Zlin). *Collection Czechoslov. Chem. Commun.* 12, 681-71 (1947) (in French).—The reaction of Cl on ketoximes to form intensely blue chloronitroso derivs., $R_2C(Cl)NO$, is converted to an analytical procedure. The aldoxime derivs., however, rearrange to colorless $RC(Cl)NOH$. 1-Chloro-1-nitrosocyclohexane (I), obtained in 80.5% yield from 585 g. cyclohexanone oxime (II) in 1000 cc. H_2O and 375 g. Cl at 0° for 1 hr. and steam distn. of the blue oily layer, bp 46° , dn 1.137 , $d_{20} 1.1137$. 1-Chloro-1-nitrosocyclopentane (III), prepd. below 20° from Cl and a mist. of 38 g. cyclopentanone (IV), 41 g. $H_2NOH \cdot H_2SO_4$, 66 g. NaOAc, and 200 g. H_2O and subsequent steam distn. of the blue oily layer, bp 44° , dn 1.127 (violent decompn.), $d_{20} 1.1267$. Chlorinated urea (V), from 60 g. urea and 15 cc. H_2O below 0° and with 30-32 g. Cl, was a mist. of crystals and a syrupy liquor; the latter, heating for several weeks, decompd. slowly at 30° and was used for the production of I and III in analysis. Oximes are detected by addn. of a few drops of V to a soln. in org. solvents or in H_2O and subsequent extn. with an org. solvent to give a blue color. Test for ketones: The sample and an excess of a soln. of $H_2NOH \cdot HOAc$ (8.3 g. $H_2NOH \cdot H_2SO_4$ and 13.7 g. NaOAc in 1000 cc. H_2O) are treated with V, etc., to give the blue color. Test for H_2NOH : The sample (neutralized with NaOAc if acidic) is treated with IV and several drops V and the blue color extd. with xylene. Detn. of II: 0.01-0.05 g. in 10 cc. HOAc in a graduated tube, 0.3-0.3 cc. V, and 30 cc. H_2O are dild. to 80 cc. with HOAc. The extinction is then measured in a Lange universal colorimeter; a red filter (Sudan 5B red) gives greater values. The precision in 0.005-0.010 molar solns. is $\pm 2\%$. The extinction of IV oxime is similarly detd. in 50% HOAc. Detn. of cyclohexanone: 3 cc. 0.5 M $H_2NOH \cdot HOAc$ is added to a sample contg. 0.01-0.05 g. ketone, and, after 20 min., 20 cc. HOAc, 0.5 cc. V, and H_2O to 50 cc. vol. are added; the extinction is measured as with II. Detn. of H_2NOH : 0.01-0.035 g. NH_4Cl in 1 cc. 0.2 M NaOAc, 0.1 cc. cyclohexanone, 20 cc. HOAc, and 0.25 cc. V are dild. to 50 cc. with H_2O . Detn. of δ -keto-hydrophthalic acid (VI): 0.01-0.04 g. $H_2NOH \cdot HCl$ in 5 cc. H_2O , neutralized with 3 N NaOH to pH 10, is treated 2-5 min. with 2 cc. 0.5 M VI; after addn. of 0.5-1.0 cc. V and dild. to 50 cc., the extinction is measured. J. W. G.

METALLURGICAL LITERATURE CLASSIFICATION

1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900

base, decomp. 210° . Al are boiled 6 m.
with 7.5 g. (Me₂CHO)Al are boiled 6 m.
CO to escape, 20 cc. iso-PrOH added, the heating
2 hrs., the iso-PrOH distd. off, 25 cc. H₂O and

cont. 20 cc. 30% - m. To II (20 g.)

shaking 400 g. of 2.5% Na-Hg and the mixt. extd. after 7 hrs. with ether; on distn. there is obtained the 3-(1-hydroxyethyl) analog of VII, b_p 162-3°: picrate, m. 225-7°. The product from the Clemmensen reduction of VII gives the same oil (mixed m.p.) as that from the same reagent reduction of VI. VII reduced with Adams catalyst and H₂ and the product crystd. from a pentane-C₆H₆ mixt. gives 3-acetyl-4,5-dimethyl-1-azabicyclo[3.3.1]nonane, m. 123°; picrate m. 234-5°. The HOCH₂CO₂Na prep. by heating 100 g. dry (CH₃OH), and Na at 100° is sprinkled with 19.5 g. VII, 13 g. freshly distd. N₂H₄·H₂O added, the mixt. heated at 220-40° 19.5 hrs., cooled to 60-70°, extd. with C₆H₆, the C₆H₆ ext. washed with H₂O, the solvent removed by distn., and the residue distd. to give 13 g. of the 3-ethyl analog of VII, b_p 95-6°; picrate, m. 237°. VII (1 g.) in HOAc adds 7.8 cc. 2 N Br soln. in HOAc, while HBr is liberated; concg. to 5 cc. and cooling give 1.45 g. of the 6-bromo deriv. of VII, m. 202-3° (from abs. alc.). O₂ (1.5-2%) is passed 50 hrs. into 10 g. VII in 100 cc. HOAc at the rate of 100-200 cc./min., the mixt. refluxed 8 hrs. to decomp. the osmium, the HOAc distd. off in a vacuum, and the residue (16 g.) crystd. by adding EtOH-H₂O, giving 1-(carboxymethyl)-3-acetyl-4,5-dimethyl-3-piperidinecarboxylic acid (VIII), m. 221-5° (decomp.).

The mother liquor from the crystn. of VIII gives with alc. picric acid the picrate, C₁₄H₁₈N₂O₆, m. 200°. II (10.1 g.) in 250 cc. HOAc is ozonized 30.5 hrs. by 2.5% O₃ at the rate of 200 cc./hr., the HOAc distd. off, and half of the sirupy liquid residue boiled with alc., yielding 3.2 g. white crystals, C₁₄H₁₈N₂O₆, m. 230-40°; osime, C₁₄H₁₈N₂O₆, m. 280°; picrate, C₁₄H₁₈N₂O₆, m. 305-6° (decomp.). Dehydrogenation of II by boiling in a bath at 350° with Se gives no identifiable product. II (5 g.) in 400 cc. H₂O at 2-5° consumed 575 cc. of 2% KMnO₄ (4 equivs. O). After filtering off the MnO₂, the filtrate is concd. and acidified with 5.5 g. concd. HCl; crystn. gives an unidentifiable product, m. 280-5°. II (0.100 g.) in 2 cc. H₂O treated with 5 drops 30% perhydrol, and the mixt. evapd. on a H₂O bath and crystd. from C₆H₆ gives 3-acetyl-4,5-dimethyl-1-azabicyclo[3.3.1]nonane 1-oxide, m. 102-3°; picrate, m. 235-47°.

Clarence T. Mason

CA

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Allyl ethers of cyclohexanone oxime. M. Hudlický and J. Hložek (Tech. Univ., Prague). *Collection Czechoslov. Chem. Commun.* 14, 861-3(1949)(in English). Cyclohexanone oxime (I) may be easily alkylated to give allyl ethers (II) which are colorless liquids of terpene-like odor, stable to 10% oleum at temps. to 40°; at 80° they form α -caprolactam. II were prepd. by adding 2 mols. dialkyl sulfate to 226 g. I in 500 g. hot 20% NaOH, heating on a steam bath 0.5 hr., cooling, extg. with Et₂O, washing the ext. with NaHSO₄ and H₂O, drying over Na₂SO₄, and distg. II prepd. in this way were: *Ms* (87% yield), *b₁* 50-1.5°, *b₂* 51.5°, *d₄²⁰* 0.9477, *n_D²⁰* 1.46311, 1.46006, 1.47310, and 1.47867 for the C, D, F, and G

lines, resp., and *Et* (32.5%), *b₁* 60.1°, *b₂* 64°, *b₃* 70°, *d₄²⁰* 0.9273, *n_D²⁰* 1.46043, 1.46327, 1.47033, and 1.47689 for the C, D, F, and G lines, resp. The allyl ether (III), *b₁* 60°, *d₄²⁰* 0.9521, *n_D²⁰* 1.4817, was prepd. in 110 g. (110% yield) by adding 240 g. I in an aq. soln. of 104 g. KOH to 240 g. CH₂:CHCH₃Br, heating on a steam bath with occasional shaking, cooling, dilg. with H₂O, extg. with Et₂O, drying the ext. over Na₂SO₄, and distg. II (1 part in g.) was added to 10% oleum (2 parts in ml.) with cool. below 40°, one-eighth of the soln. heated to 80° (a violent reaction occurred), the product heated to 120°, and the rest of the mixt. added slowly; after the reaction had subsided, the mixt. was poured onto ice, neutralized with (NH₄)₂CO₃, and extd. with Et₂O, approx. 50% α -caprolactam, m. 68° (from ligroin), being obtained from the ext.

E. U. Elum

CA

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Analysis of the system cyclohexanone-cyclohexanol-phenol. Milos Hladky (Tech. Univ., Prague). Collection Czechoslov. Chem. Commun. 14, 564-565 (1949) (in English).—A rapid, simple analysis of the system cyclohexanone (I)-cyclohexanol (II)-PhOH (III), accurate to 1-2%, is based upon the measurement of the n_D and d_4^{20} of the sample; the compn. of the sample is read directly from the triangular diagram constructed from measurements of a series of known mixts. The data are given for mixts. which contain less than 20% III, from 18 to 100% II, and 20-100% I. P. U. Elam

CA

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Reactions of 1,2-dichloro-2-butene. I. *p*-Chlorocrotonic and tetrolic acids. Miroslav Dohal and Miroslav Hudlický (Tech. Univ., Prague, Czech.). *Chem. Listy* 88, 453-3 (1931).— $\text{MeCCl:CHCH}_2\text{OH}$ (I) (80.3 g.), obtained by alk. hydrolysis of MeCCl:CHMe , was oxidized with 164 g. CrO_3 in 1470 ml. H_2O below 10° during 5 hrs.; ether extr. yielded 17.3 g. (33.3%) 2-chloro-2-butenoic acid (II), b_p $40-41^\circ$. A better yield was obtained by oxidizing 10.6 g. I with 14.7 g. CrO_3 in 95 g. Me_2CO and 65 ml. H_2O concg. 27 g. 11.8% at -8° to 8° ; ether extr. yielded 3.7 g. 55% II, a yellowish liquid of crotonaldehyde-like odor, b_p $37-40^\circ$, n_D^{20} 1.173 (semicarbazone, m. $162-3^\circ$ (from EtOH)). II gave 8.7% 3-chloro-2-butenoic acid (trans-*p*-chlorocrotonic acid), m. $92-93^\circ$, on autocatalysis, 13% with Ag_2O , 17.3% or catalytically with air and $(\text{AcO})_2\text{Mn}$. MeC:CCl:OH (prepd. from I by alk. dehydrohalogenation in 60% yield) (20 g.) oxidized in Me_2CO with chromic mist. at 4° gave 8.6 g. (35.8%) tetrolic acid, m. 78° , obtained by ether extr. M. Hudlický.

10

CA

isocyanate compounds containing large rings. Mild Hud
luchy. Chem. Listy 48, 518-17(1951). -- A review with ref.
reference. M. Modkhy

CA

Hydrogen Peroxide-10

Oxidation of carbonyl compounds with hydrogen peroxide
and peroxide. Mink (Hudichy, Chem. 66, 667-68
(1963)).--A review with a list of oxidized compds. and 65
references. M. Hudichy

Hudlicky, Milos

Hudlicky, Milos, and Trojanek, Jan: Preparativni reakce
v organické chemii. Díl I. Prague: Nakladatelství česko-
slovenské akad. věd. 1953. 481 pp.

Hudlicky, M.

✓ Herout, V., Kell, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Laboratorní technika organické chemie. Prague: Nakl. CSAV. 1954. 756 pp. Kčs 80. Reviewed in Chem. Listy 49, 1415 (1955).

Chem + Educ

Herout, V., Kell, B., Protiva, M., Hudlicky, M., Ernest, I., and Gut, J.: Organic Chemistry Laboratory Techniques. Publishing House CSAV. 1954. 756pp. Kcs. 86. Reviewed in Chem. Listy 49, 1415 (1955).

PM

Hudlicky, Milos

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CZECH

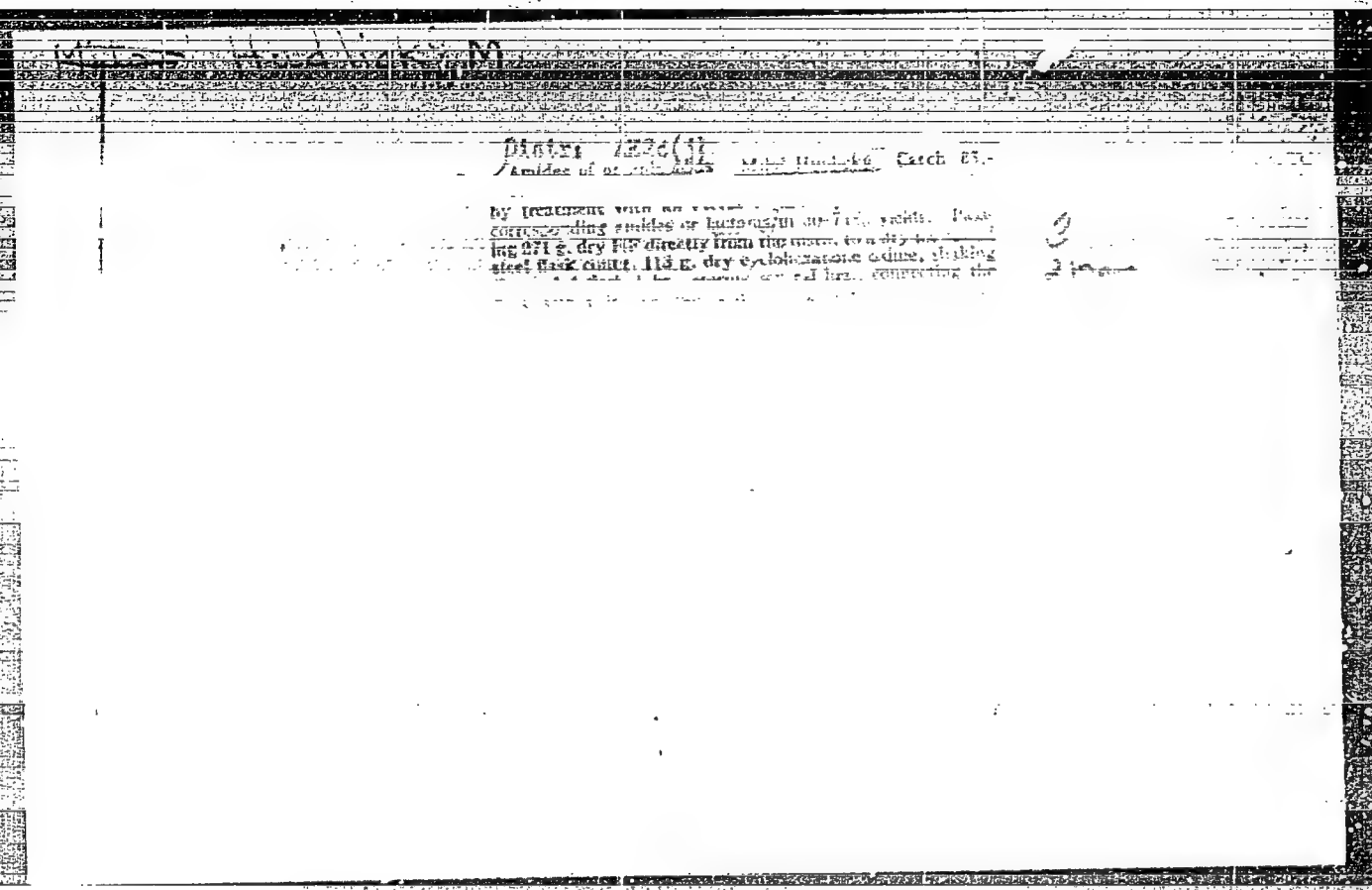
Hudlicky, Milos: Preparativni Reakce v Organické
Chemii. Praha: Nakl. Česk. Akad. Věd. 1955.
565 pp. Cf. C.A. 48, 9401c.

Chem

Hudlicky, Milos: Preparative Reactions in Organic Chemistry. Part II.
Prague: Publishing House of the Czech Academy of Sciences. 1955. 565pp.

Cf. C.A. 48, 9401c.

PM



HUDLICKY, MILOS

"Methody preparativni organicke chemie. [vyd.1.] Praha, Statni nakl. technicke literatury, 1956. [methods of preparatory reactions in organic chemistry. 1st ed. index/."

p.381 (Praha, Czechoslovakia)

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 8, August 1958

~~Mr. J. H. Hicky~~ Hudlicky, Miles

DEC 15 1960

Adding slowly 120 g. 25% H₂O₂ and 60 g. cyclohexanone to 530 g. dry HF in a steel tank while shaking and cooling with Dry Ice and H₂SO₄, leaving 18 hrs. at room temp., distilling and 750 in vacuum, and extracting the residue with Et₂O gives 98.6 g. crude product with reaction which starts in 10 sec.

HUDLICKY, MILOŠ

Reaction of 1,1-dichloro-2-butene. II. Synthesis of
2,3,4-trimethylpyridine. Miloš Hudlický,
and Zdeněk Janů. Collection Czechoslov. Chem. Commun.
21, 140-5 (1956) (in English). - See C.A. 50, 7700g.
E. J. C.

RM

Czechoslovakia/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 900

Author: Lukes, R., Hudlicky, M., and Janu, Z.

Institution: None

Title: Reactions of 1,3-dichloro-2-butene. II. Synthesis of 2,3,4-trimethylpyridine

Original
Periodical: Chem. listy, 1956, Vol 50, No 2, 258-263 (published in Czech); Sb. chekhosl. khim. rabot, 1956, Vol 21, No 1, 140-145 (published in English with a Russian summary);

Abstract: The action of benzylamine (I) on 1,3-dichloro-2-butene (II) yields bis-(γ -chlorocrotyl)-benzylamine (III). Treatment of the latter with concentrated H_2SO_4 leads to the evolution of HCl and the formation of N-benzyl-3-acetyl-4-methyl-1,2,5,6-tetrahydropyridine (IV). Distillation of IV at ordinary pressures causes decomposition with the formation of 2,3,4-trimethylpyridine (V) and toluene; distillation of the hydrochloride of IV likewise yields V, with the additional formation

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Czechoslovakia/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 900

Abstract: of benzylchloride. Similar cleavages followed by rearrangement have been described previously (V. Prelog et al, Helv. chim. acta, 1942, 25, 1654). To one mole of I in 360 ml of water with 3 moles of NaOH add 2 moles of II (20 minutes at 42°); raise the temperature to 98° for 3.5 hours and stir 4.5 hours. At that temperature III is obtained in yields of 67%, bp 123.5-133.5°/1.2-1.7 mm; the picrate, mp 132-133° (from alcohol), is also formed. Add dropwise 0.5 moles of III to 150 ml of 96% H₂SO₄ at 80°, heat while passing a stream of air through the solution (to remove HCl) for 6 hours, pour over ice, make the solution alkaline, and remove C₆H₆; IV is recovered as the picrate in yields of 29.5%, mp 146-146.2° (from alcohol). IV is obtained from the picrate, bp 131°/0.2 mm, n_D^{20} 1.5519, d_4^{20} 1.0492, M_R 69.82. Distillation of IV at 115-400° gives V in yields of 34%, bp 188.5-189.5°/740 mm, n_D^{20} 1.5151, $n_D^{22.7}$ 1.5138, d_4^{20} 0.9543 (n_D markedly decreases during prolonged contact of V with air because of the high hygroscopicity of V; this explains the divergences in the physical constants given in the literature). V is obtained in 47-6% yields by the distillation of IV with 3% HCl (gas) and in 65.2% yields from the distillation of the hydrochloride of IV; in the latter case the picrate is also formed,

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caru 3/3

1. The first part of the document is a list of the names of the individuals who were involved in the project. The names are listed in alphabetical order.

2. The second part of the document is a list of the names of the individuals who were involved in the project. The names are listed in alphabetical order.

1
Carbonyl acid amides. M. Hudlický, Czech. 87,126, Sept. 15, 1957. Acetophenone oxime (1 g.) was mixed with 8 g. $\text{CF}_3\text{CO}_2\text{H}$ (I) at -15° and the mixt. heated to 90° . An exothermic reaction took place. The mixt. was heated 2 hrs. and I evapd. *in vacuo*. The residue gave on crystn. from 20 ml. H_2O 0.53 g. acetanilide, m. $112-13^\circ$. Similarly, benzanilide (m. $162-3^\circ$) from benzophenone oxime and ϵ -caprolactam (b.p. $100-1^\circ$, m. $64-8^\circ$) from cyclohexanone oxime were obtained. M. Protiva

2
1-9-9 (1/8)

Hudlicky, Milos

CZECHOSLOVAKIA/Organic Chemistry - Synthetic Organic Chemistry. G-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25059

Author : Hudlicky Milos

Inst :

Title : Reactions of 1,3-Dichloro-2-Butene. IV. Reaction with Grignard Reagents.

Orig Pub : Chem. listy, 1957, 51, No 2, 336-340; Sb. chekhosl. khim. rabot, 1957, 22, No 2, 577-582

Abstract : 1,3-dichloro-butene-2 (I) reacts with RMgX through the Cl atom in allylic position, to form chlorolefins $RCH_2CH=CClCH_3$ (II) [$R = C_4H_9$ (a), $n-C_6H_{13}$ (b), C_6H_5 (c) and $C_6H_5CH_2$ (d) ; IIa-c yield with concentrated H_2SO_4 methyl ketones $R(CH_2)_2COCH_3$ (III), while II d -- a mixture of methyl naphthalene and methyl tetralin. Boiling of ether solution of RMgX (from 1 mole Mg and 1 mole RX) with 1 mole I gives II (RX, reaction duration in hours, yield of II in %, BP in $^{\circ}C/mm$, nD (temperature in $^{\circ}C$):

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CZECHOSLOVAKIA/Organic Chemistry - Synthetic Organic Chemistry, G-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25059

C_6H_5Br , 3, 13, 83-92/50, 1.4434 (18); C_6H_5Br , 6, 17, 91.5-97/14.5 (solution of $RMgX$ added to boiling I; IIb contains admixture of $n-C_4H_9$) C_6H_5Br , 6.5, 19, 102-105/15, 1.5332 (20); $C_6H_5CH_2Cl$, 2, 38, 119-122/14.5, 1.5267 (20); d_4^{20} 1.0259. 0.08-0.16 mole of II stirred at 25° with 50-100 ml 96% H_2SO_4 , blowing a current of air through the mixture, to get III (R, duration of reaction in hours, yield in %): a, 18.72; b, 3, 38; c, 1.5, 53. Communication III see RZhKhim, 1957, 60466.

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HUDLICKY, M.

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11247

Author : Hudlicky, M.

Inst :

Title : The Beckmann Rearrangement in Trifluoroacetic Acid

Orig Pub: Chem. Listy, 51, No 3, 470-473 (1957) (in Czech)

Abstract: It has been established that CF_3COOH (I) is both a catalyst and a solvent for the Beckmann rearrangement of acetophenone oxime (II), benzophenone oxime (III), and cyclohexanone oxime (IV) and of the corresponding amides. For a concentration of IV in I of 39.5% at temperatures of 75, 87.5, and 99° the following values have been obtained for the reaction rate constant: 0.00067, 0.0035, and 0.14; for a concentration of 20.2%: 0.0051, 0.013, and 0.036; for a concentration of 11.0%: 0.012, 0.025, and 0.18. The re-

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11247

action appears to be first order and the velocity decreases with increasing concentration. II is dissolved in molten I, refluxed 2 hrs, yield 53% acetanilide, mp 112-113° (80% of the I is recovered). By a similar procedure III yields 88% benzanilide, mp 162-163°. ϵ -caprolactam by 100-101°/2.5 mm, mp 64-68° is obtained by a similar procedure from IV in yields of 62.5%.

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Hudlicky, M.

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36284.

Author : Jarkovsky Pesata, Hudlicky M.

Inst : Not given.

Title : Reactions in the Anhydrous HF. III. Synthesis of Dichlorodifluoromethane.

Orig Pub: Chem. listy, 1957, 51, No 4, 625-632.

Abstract: Synthesis of CCl_2F_2 from CCl_4 and HF was investigated. Small quantities of SO_2 and water do not hinder this reaction. Catalytic activity of SbCl_5 rapidly decreases in the presence of CS_2 which reduces it to SbCl_3 . As the result of that, when using technical grade CCl_4 , small amount of Cl_2 should be added. It is recommended to employ 0.08 mols of catalyst for 1 mol of CCl_4 , 10-20% excess HF, and maintenance of temperature at 100-120°C.

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry.

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Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36284.

A test run conducted (that involved preparation of 6.25 mols of product) extended for approx. 16 hours. During its course were used 150 gr. SbCl_5 , 1020 gr. CCl_4 , and 300 gr. anhydrous HF. The reactants were gradually brought up to 100-120°C as pressure was raised up to 30 atmospheres (1-2 hours). The gaseous products were condensed. Yield of CCl_2F_2 was 93% and of CCl_3F was 2%. For part II refer to Chem. listy, 1952, 46, 92.

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43446.

amounts of catalyst increase the formation of CHF_3 .
Under the above stated conditions there are formed
3.1% of CHCl_2F , BP 9-10°.

V. Preparation of $\text{C}_2\text{Cl}_3\text{F}_3$ (I) in the usual equipment
(see preceding communication) is difficult due to
insolubility of C_2Cl_6 in HF. The reaction can be ef-
fected by increasing the amount of SbCl_5 , which acts
as a solvent (0.56 mole per 1 mole C_2Cl_6). The op-
timum ratio $\text{HF}:\text{C}_2\text{Cl}_6$ is 4, temperature 150°, pres-
sure 20 atmospheres, duration 16-25 hours. Yield of
I 84.8%, together with 4.4% $\text{C}_2\text{Cl}_3\text{F}_4$ and 2.2% $\text{C}_2\text{Cl}_4\text{F}_2$.

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Hudlicky, Miloš

Distr: 422d/4E2c(j)

Reactions of 1,3-dichloro-2-butene V Preparation of
some pyridylalkanoic acids. J. M. Hudlicky, and
František Mareš (Chem. Univ. Prague), Chem. Listy 51,
187 (1957), cf. J. 51:187. A series of papers to be
RtO soln. of PhI (100 ml) in 10% EtOH and 100 ml
EtOH of mixed reagents (10% EtOH and 10% EtOH) and
boiling the dist. to give 100 g. of 10% EtOH (100 g.)
CH₂ClCH₂CCl₃ reducing 10% EtOH, decoupling the
mixture with 100 ml H₂O, the 10% EtOH and 10% EtOH com-
bining the ext. with 10% EtOH and 10% EtOH and using
the residue to give 10% EtOH and 10% EtOH, the original
components, which could be recovered, and 20 g. crude 1-
(α -pyridyl)-1-chloro-3-pentene (I), b.p. 110-112°. This was
dissolved in dil. HCl (1:1), the aq. PhI filtered off, the
filtrate extd. with CCl₄, the aq. layer alkalinized with NaOH,
extd. with CHCl₃, and the CHCl₃ ext. distd. to give 193 g.
pure I, b.p. 115-117°, d₄²⁰ 1.0762, n_D²⁰ 1.5261; picrate, m. 93-94°
(EtOH). I (1 g.) ozonized at -10° in CHCl₃ and the soln.
and the ozonide heated with AcOH and H₂O 2 hrs. at 70°
gave 0.65 g. β -(α -pyridyl)propionic acid (II), m. 139.5-140°
(C₆H₅). Treating 193 g. I with 100 ml. 20% H₂SO₄ for
0.5 hrs. while stirring and passing through a stream of air,
pouring the product on ice, neutralizing with NaOH, sepg.
the org. layer, extg. the aq. layer with CHCl₃, and distg. the
CHCl₃ layer gave 131.9 g. 1-(α -pyridyl)-4-pentanone (III),
b.p. 124-125°, n_D²⁰ 1.5081; picrate, m. 110.5-111° (EtOH),
characterized by condensation (3 g. III) with 3.8 g. BzH by
stirring in 12 ml. EtOH, 4 ml. H₂O, and 3 ml. 10% NaOH 30

Notes on the synthesis of 1-(6-piperidyl)-5-phenyl-5-hexenoic acid

hrs. at room temp., and extg. with Et_2O and CaH_2 yielding 7 g. crystals, m. 158° (dil. EtOH), apparently of 1-(6-piperidyl)-5-phenyl-5-hexenoic acid. Degradation of III (5 g.) with NaOH by the usual procedure gave, when crystallized, CaH_2 , 1.15 g. γ -(6-piperidyl)butyric acid, m. 94° , and 1.02 g. II. Other modifications of the Wittig reaction having failed, a mixt. of 70 g. III, 16 g. powd. S, and 50 g. morpholine was divided into 14 glass tubes (5 g. each), heated 3 hrs. to 209° , the combined contents ladled 12 hrs. with 210 ml. 50% H_2SO_4 at 135° , the cooled reaction mixt. alkalinized, 53 g. black sticky material filtered off, the filtrate extd. with CHCl_3 , the aq. soln. decolorized with C, neutralized to pH 5, evapd. to dryness, the residue d. cd. by azeotropic distn. with CaH_2 and extd. with CaH_2 to give 1.2 g. 6-piperidylvaleric acid (IV), m. 27° (dil. EtOH). IV was dissolved in an aq. soln. with Raney Ni, the soln. filtered, and hydrogenated over PtO_2 gave δ -(6-piperidyl)valeric acid, m. 177° (EtOH - H_2O).

L. J. Kirbánek

2/2

111

HUDLICKY, M.; MARES, F.

"Reactions of 1,3-dichloro-2-butene" V, Preparation of some pyridyl substituted fatty acids. In English. p. 46.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czechoslovakia,
Vol. 24, No. 1, Jan. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Sept. 59

Unclassified

06620

AUTHOR: Hudlický, M.

CZECH/8-53-1-16/20

TITLE: Conference on the Chemistry of Fluorine

PERIODICAL: Chemické listy, 1959, Vol 53, Nr 1, pp 51 - 52

ABSTRACT: A conference on the chemistry of fluorine took place in Prague during June, 1958, at which thirty papers were presented. They were partly reviews and partly original reports. Original work has been or will be published in the following journals: Collection, Chemické průmysl, Chemické zvesti and other journals.
(n.b. A report on the conference is given in this journal and the reviews will be published in its further issues.)

The Czechoslovak Chemical Society, Czechoslovak Ac.Sc., arranged on June 9 and 10, 1958, a national conference on the chemistry of fluorine. The aim of the conference was to make publically available information on the present state, nationally and internationally, of the chemistry of fluorine, as well as to evaluate the results obtained in Czechoslovakia in this field and coordinate

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Conference on the Chemistry of Fluorine

work in individual centres and to give new incentives for research and technology.

The conference began in the large lecture theatre of the Faculty of Chemical Technology (Technical University), Prague. It was opened by the introductory remarks of Academician Lukeš and the conference programme was divided into four sections.

The first half-day session was devoted to lectures on the basic raw materials for fluorine chemistry. The lecture of J. Kašpar (Faculty of Chemical Technology, Prague) contained concrete information on the occurrence of fluorite. The lectures of E. Dobiaš and J. Spurný (Faculty of Chemical Technology, Prague) and of J. Kocourek (Institute of Ore Research, Prague) reported on the preparation of fluoritic ores by flotation. A lecture by M. Odehenal (Faculty of Natural Sciences, Masaryk University, Brno) dealt with the winning of fluorosilicates during the production of citrophosphate.

The second half-day session was made up of lectures in the field of inorganic chemistry.

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Conference on the Chemistry of Fluorine

J. Suchard (Corporation for Chemical and Metallurgical Production, Ústí nad Labem) reviewed work performed by the Corporation in the production of hydrogen fluoride, cryolite, fluorosilicate and inorganic fluoride; his lecture was supplemented by detailed information on the production of hydrofluoric acid (S. Vondruš, the Corporation); chemically pure fluorides (V. Tyl, the Corporation) and fluorosilicates (J. Dubišar, the Corporation).

K. Matiaševský (Slovak Academy of Sciences, Bratislava) delivered a very detailed lecture on the production of elemental fluorine and the difficulties involved.

V. Machaček (Institute of Nuclear Physics, Czechoslovak Ac.Sc., Prague) presented a paper on the preparation of uranium fluorides.

Two further lectures dealt with health questions.

J. Marhold (Institute for Organic Synthesis Research, Pardubice-Rybitví) drew attention to the dangers of

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(Institute for Stomatological Research, Prague)
fluorine and its compounds and J. Ružicka/spoke on the
significance of fluorine in dental medicine.

The analytical section was inaugurated by the review
given by J. Vreštal (Antonín Zápotocký Military Technolo-
gical Academy, Brno) on the analytical determination of
inorganic fluorides. Reports on original work dealt with
the determination of water in high percentage hydrogen
fluoride (K. Otto, M. Uhlíř, Institute for Research in Macro-
molecular Chemistry, Brno); pyroanalytic estimation of
fluorine (K. Zubec, the Association), spectrographic
determination of fluorine in silicates (A. Spačková -
Stodolová, Central Geological Institute, Prague) and the
determination of fluorides in the atmosphere during the
welding of basic electrodes (L. Hanslian, Regional Station
for Hygiene and Epidemiology, Olomouc).

Methods for the analytical determination of fluorine in
organic materials were summarised in the review given by
K. Otto (Institute for Research in Macromolecular Chemistry,
Brno).

Card4/7 The work of J. Horáček and J. Kůrbl (Czechoslovak Ac.Sc.

Conference on the Chemistry of Fluorine

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and Institute for Pharmaceutical and Biochemical Research, Prague) dealt with the determination of carbon and hydrogen in organic compounds containing fluorine. The subject dealt with in the work of J. Janák and J. Novák (Laboratory for Gas Analysis, Czechoslovak Ac.Sc., Brno) and of V. Pokorný (Institute for Research in Macromolecular Chemistry, Brno) was the chromatographic analysis of gaseous organo-fluorine derivatives.

The fourth half-day programme, the richest one, was occupied by papers on organo-fluorine compounds.

M. Hudlický (now of the Faculty of Chemical Technology, Technical University, Prague) spoke on the mode of introduction of fluorine into organic compounds, on the preparation of the main types of organofluorine derivatives and on the applications of fluorinated compounds.

The subject of V. Reinšl's (Institute for Research in Macromolecular Chemistry, Brno) paper concerned the technological methods of production of the most important refrigerants (freons) and their application.

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Conference on the Chemistry of Fluorine CZECH/8-53-1-16/20

The lectures of J. Zdražil (Institute of Research in Macromolecular Chemistry, Brno) and of M. Lazar and R. Rado (Institute for Cable and Insulator Research, Bratislava) considered the preparation and properties of fluorinated polymers (teflon, teflex and copolymers). The paper of M. Hudlický (Faculty of Chemical Technology, Technical University, Prague) dealt with the use of fluoro-derivatives as media for and catalysts in various organic reactions.

D. Ambros and J. Rovner (Institute for Research in Macromolecular Chemistry, Brno) presented a communication dealing with the auto-oxidation of trifluorochloroethylene, the crystallisation of its polymers and the determination of its molecular weight.

It is estimated that 70-80 chemists participated in the conference, among whom was a celebrated guest, Professor A.L. Henne, the discoverer of freon, from Ohio State University, USA.

The conference showed that the chemistry of fluorine, a

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Conference on the Chemistry of Fluorine

not very ancient field of study, is being fostered in quite a number of Czech laboratories and a number of modest but valuable results have been produced, as evidenced by the number of papers published in Czechoslovak chemical journals (see the bibliography on pp 52-53). It is necessary to support to the utmost the development of this branch of studies so that they may eventually be able to reduce the 10-25-year lead which the advanced industrial states have.

Card7/7

HUDLICKY, M.

"Fluorine compounds as catalysts and reagents in chemical reactions"

Chemicke Listy. Praha, Czechoslovakia. Vol. 53, no. 3, mar 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 59, Unclas

HUDLICKY, M.

"Organic fluorine compounds"

Chemické Listy. Praha, Czechoslovakia. Vol. 53, no. 3, Mar 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 59, Jnclos

HUDLICKY, M.

Organic compounds of fluorine. I. Fluorinated acetylenic carbinols.
Coll Cz Chem 25 no.4:1199-1209 Ap '60. (EEAI 9:12)

1. Research Institute for Pharmacy and Biochemistry Prague.
(Fluorine) (Organic compounds) (Acetyl group)
(Alcohols)

PHASE I BOOK EXPLOITATION

SOV/5889

Hudlicky', Milos

Khimiya organicheskikh soyedineniy ftora (The Chemistry of Organic Fluorine Compounds) Moscow, Goskhimizdat, 1961. 372 p. Errata slip inserted. 6500 copies printed.

Translated from the Czech by Yu. I. Vaynshteyn.

Ed. (Title page): A. P. Sergeyev; Tech. Eds: V. F. Zazul'skaya

PURPOSE: This book is intended for organic chemists and for workers in the plastics industry and in establishments which produce or utilize refrigerants.

COVERAGE: The textbook is a comprehensive treatise on the chemistry of organic fluorine compounds. The basic information necessary for experimental work and laboratory techniques, which are in many cases unusual, are included, and the possibility of further development of the chemistry of organic fluorine compounds is discussed. Special interest is shown in fluorine

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The Chemistry of Organic Fluorine Compounds

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compounds which contain a considerable number of fluorine atoms in the molecule (polyfluoro and perfluoro derivatives, or polymers). These compounds are characterized by inertness and thermal and chemical stability, and are of theoretical interest because their behavior differs from that of other halogen compounds. This emphasis is reinforced by the rather extensive formula and subject indices and the chapters on properties, toxicity, and applications of fluorine compounds. The author, who studied the chemistry of organic compounds at Ohio and Purdue Universities under a UNESCO grant, thanks persons in the U. S. who have assisted him. He further thanks his wife, A. Hudlicka', R. Lukesh and Vikhterle, Academicians, and Reynoyl', Engineer.

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The Chemistry of Organic Fluorine Compounds

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Subject Index

AVAILABLE: Library of Congress

SUBJECT: Chemical Engineering

BN/dk/gwp
2-27-62

Card 4/4

HUDLICKY, M.

"Methods of organic chemistry. Vol. 4: Halogen compounds" by Houben and Weyl. Reviewed by M. Hudlicky. Coll Cs Chem 26 no.7:1899-1900 J1 '61.

(Houben, Josef) (Weyl) (Chemistry, Organic)
(Halogen compounds)

HUDLICKY, M.

Organic compounds of fluorine. Part 3: Reaction of trifluoromethylalkyl ketones with acetylene. Coll Cz Chem 26 no.12:3140-3146 D '61.

1. Research Institute for Pharmacy and Biochemistry, Prague.

KAKÁČ, B; HUDLICKÝ, M.

Czechoslovakia

Research Institute for Pharmacy and Biochemistry --
Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 11, 1962, pp 2616-2619

"Quantitative Determination of Fluothane and its
Isomer by Means of Infrared Spectrophotometry."

HUDLICKY, Milos

Improved apparatus for hydrogen bromide preparation. Chem listy 56
no.12:1442-1444 D '62.

1. Vyskumny ustav pro farmacii a biochemii, Praha.

KAKAC, B.; HUDLICKY, M.

Organic compounds of fluorine. Pt.7. Coll Cz Chem 30 no.3:
745-751 Mr '65.

1. Research Institute of Pharmacy and Biochemistry, Prague.
Submitted February 25, 1964.

APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R000

31(

L 65011-65

ACCESSION NR: AP5023335

EWA(j)/EPF(c)/EWP(j)/EWA(b)

CZ/0008/64/000/012/1373/1377

AUTHOR: Hudlicky, Milos

TITLE: Progress in the chemistry of organic compounds of fluorine

SOURCE: Chemické listy, no. 12, 1964, 1373-1395

TOPIC TAGS: fluorinated organic compound, fluorination, chemical engineering

ABSTRACT: Progress in the field in the last 6 years is reviewed. Fluorination agents are described, and methods of introducing F into organic compounds are evaluated. Reactions of organic F compounds are discussed; fluorinated organic agents and analytical processes used in their determination are reviewed. Uses of organic fluorine compounds are described, and individual plastic materials based on those are discussed. The present-day

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ACCESSION NR: AP5023335

production of organic F compounds in Czechoslovakia is reviewed. The main uses at present are as refrigerating fluids; trifluoroethylene is manufactured and polymerized into a plastic trade-named "Teflex", and a F based narcotic named "Narkotan" is also produced.

Orig. art. has: 49 formulas, 1 graph.

ASSOCIATION: Vyzkumny ustav pro farmacii a biochemii, Prague (Institute of Pharmacology and Biochemistry)

SUBMITTED: 00

ENCL: 00

SUB CODE: 00, GC

NR REF SOV: 006

OTHER: 117

JPRS

Card 2/2

CZECHOSLOVAKIA

HUDLICKY, M; KAKAC, B

Research Institute for Pharmacy and Biochemistry,
Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 3, March 1966, pp 1101-1112

"Organic compounds of fluorine. Part 10: The synthesis
of δ -fluoronorleucine, δ -hydroxynorleucine, alloisoleu-
cine, ω -hydroxyisoleucine, and β -methylproline."

31(

CZECHOSLOVAKIA

HUDLICKY, M; ANJHANCOVA, I

Research Institute for Pharmacy and Biochemistry,
Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 3, March 1966, pp 1016-1018

"Organic compounds of fluorine. Part 9: The preparation
of δ -fluoronorleucine and δ -hydroxynorleucine"

6
GLISIN, Vladimir B.

GLISIN, Vladimir B.; Given Name

Country: Yugoslavia

Academic Degrees: not given

Affiliation: Department of Radiobiology, Institute of Nuclear Sciences
"Boris Kidrich"

Source: Belgrade-Vintehi, Bulletin of the Institute of Nuclear Sciences
"Boris Kidrich", Vol 11, Mar 1961, pp 219-277.

Data: "Some Changes of Physical-Chemical Properties of Deoxyribonucleic
Acid Isolated From *Salmonella Typhimurium* Irradiated by UV and
Gamma Rays."

Co-authors:

MUDNIK-PLAVNIK, Zsuzsa, Department of Radiobiology, Institute of
Nuclear Sciences "Boris Kidrich",

SIMIC, Marta M., Department of Radiobiology, Institute of Nuclear
Sciences "Boris Kidrich",

KANALIS, Dusan T., Department of Radiobiology, Institute of Nuclear
Sciences "Boris Kidrich".

HUDNIK-PLEVNIK, Tamara; SIMIC, Marta M.

Quantitative changes in the base composition of DNA
(desoxyribonucleic acid) extracted from *Salmonella Typhimurium*
irradiated with ultraviolet rays. Bul Inst Nucl 11:231-233
'61.

1. Institute of Nuclear Sciences "Boris Kidrich," Department
of Radiobiology, Vinca.

BECAREVIC, A.; HUDNIK-PLEVNIK, T.; GLISIN, V.; JANKOVAC, J.; KANAZIR, D.;
SIMIC, M.; RISTIC, G.

Labeling nucleic acids with isotopes and their use. Prim. radioaktiv.
izotop. 2 no. 3:80-83 D '61.
(DNA) (PHOSPHORUS ISOTOPES).

HUDNIK-PIEVNIK, T.; KANAZIR, D.

Structural changes in desoxyribonucleic acid after UV
irradiation in *Salmonella typhimurium*. Bul sc Youg 7
no.1/2:14 F-Ap '62.

1. Institut "B. Kidric," Vinca, Beograd.

*

HUDOLIN, Vladimir; HUDOLIN, Vlasja

Complications following suboccipital myelogram performed with iodized oil. Srpski arh. celok. lek. 90 no.1:23-29 Ja '62.

1. Neurolosko-psihijatrijski odjel Opce bolnice "Dr Mladena Stojanovica" u Zagrebu Sef: dr Vladimir Hudolin.

(SPINAL CORD radiog) (IODIZED OILS toxicol)
(BRAIN dis)

5

HUDOLIN, Vl.; PETROVIC, F.

Diagnosis of tuberous sclerosis; two personal case reports.
Neuropsihijatrija 4 no.3-4:209-217 1956.

1. Iz Neurolosko-psihijatrijskog odjela (predstojnik prof. dr. J. Breitenfeld) i Rentgenskog zavoda (predstojnik prof. dr. S. Kadrnka) Opce bolnice Dr. Ml. Stojanovica u Zagrebu.
(TUBEROUS SCLEROSIS, diag.
(Ser))

HUDOLIN, Vl., Dr.; MUHREK-SIMUNEK, J.; BREITENFELD, J., dr.

Psychiatry and clinical psychology. Ljesc. vjes. 70. 11-12:
513-518 Nov-Dec 56.

1. Iz Neuroloski-psichijatrijskog odjela Opce bolnice dr.
M. Stojanovica u Zagrebu.

(PSYCHIATRY,

relation to clin. psychol. (Ser))

(PSYCHOLOGY

relation to psychiatry of clin. psychol. (Ser))

HUDOLIN, Vladimir

Retinal changes in tuberous sclerosis. Neuropsihijatrija 8 no.1/2:
30-42 '60.

1. Iz Neurolosko-psihijatriskog odjela Opce bolnice dra M.Stojanovica
u Zabregu (Sef odjela: Dr.Vladimir Hudolin)
(TUBEROUS SCLEROSIS diag)
(RETINA dis)

HUDOLIN, VI; RIESSNER, D.; KADRKA, S.; KNEZEVIC, M.

Giant osteoma of the lamina cribrosa. (Contribution to the diagnosis of frontal lobe syndrome). Neuropsihijatrija 8 no.4:306-316 '60.

1. Iz Opće bolnice dra M. Stojanovica u Zagrebu: Neurolosko-psihiatrijski odjel (Sef: Dr. VI. Hudolin) Kirurški odjel (Sef: Dr. D. Riessner) Zavod za radiologiju (Sef: Dr. S. Kadrka) Zavod za patologiju (Sef: Dr. M. Knezevic).

(OSTEOMA case reports) (FRONTAL BONE neopl)

HUDOLIN, Vladimir, Dr.

Prevention of alcoholism, therapy and rehabilitation of alcoholics.
Lijec vjes 82 no.6:473-483 '60.

1. Iz Neurolosko-psihijatrijskog odjela Opce bolnice "Dra M.Stojanovica"
u Zagrebu
(ALCOHOLISM prev & control)

HUDOLIN, Vl.; PRAZIC, B.; MUACEVIC, V.; BARAC, B.

Social problems in transvestitism. Neuropsihijatrija 9 no.1:54-62
'61.

1. Iz Neurelosko-psihijatrijskog odjela Opce bolnice "Dr. M. Stojanovica",
Zagreb (Sef: Dr. Vladimir Hudolin).

(SEX DEVIATION)

HUDOLIN, Vladimir, dr.

Prevention of alcoholism, therapy and rehabilitation of alcoholics
(according to pneumoencephalographic examination of 147 cases).
Med. glasnik. 15 no.2/2a:76-80 F '61.

1. Neurolosko-psihijatrijski odjel Bolnice "Dr. M. Stojanovica" u
Zagrebu. (Sef odjela: dr Vladimir Hudolin).

(ALCOHOLISM) (VENTRICULOGRAPHY)

HUDOLIN, Vladimir; HUDOLIN, Vlanja

Complications following suboccipital myelogram performed with iodized oil. Srpski arh. celok. lek. 90 no.1:23-29 Ja '62.

1. Neurolosko-psihijatrijski odelj Opce bolnice "Dr Mladena Stojanovica" u Zagrebu Sef: dr Vladimir Hudolin.

(SPINAL CORD radiog) (IODIZED OILS toxicol)
(BRAIN dis)

5

HUDOMEL, Jozsef

10 years' experience with dacryocystorhinostomy. Szemeszet 97
no.3:141-149 S '60.

1. A Budapesti Orvostudományi Egyetem II. sz. Szemklinikájának
közleménye (Igazgató: Monay Tibor egyetemi tanár, az orvostudományok
kandidátusa)
(LACRIMAL APPARATUS surg.)

HUDOMEL, Jozsef

On foreign bodies at the chamber angle. Szemeszet 98 no.2:82-86
Je '61.

1. A Budapesti Orvostudományi Egyetem II sz. Szemklinika-jának közleménye
(Igazgató: Nonay Tibor egyetemi tanár, az orvostudományok kandidátusa)

(EYE foreign bodies)

HUDOMEL, Jozsef; TOTH, Margit

Considerations on the Groenblad-Strandberg syndrome. Szemeszet 99
no.2:111-118 Je '62.

(PSUEDOXANTHOMA ELASTICUM)

HUDOMEL, Jozsef

Abnormal course of a retinal vessel in the central fovea. Szemeszet.
99 no.3:166-169 S '62.

1. A Budapesti Orvostudományi Egyetem II. sz. Szemklinikájának
közleménye. (Igazgató: Nonay Tibor egyetemi tanár, az orvostudományok
kandidátusa).

(RETINA blood supply)

L 40866-66

ACC NR: AP6030195

SOURCE CODE: CZ/0017/66/055/004/0203/0210

AUTHOR: Huducek, Zdenko (Engineer)

ORG: none

TITLE: Opening time in mine networks with a non-grounded neutral point with regard to contact voltage

SOURCE: Elektrotechnicky obzor, v. 55, no. 4, 1966, 203-210

TOPIC TAGS: electric capacitor, electric resistance

ABSTRACT: On the basis of an energy criterion the article derives the limiting opening time of a low-voltage network with a non-grounded neutral point upon contact with a human body. The limiting time is reduced to a function of four variables: the network voltage, the total leakage resistance of the network, the partial capacitances to ground, and the resistance of the human body. The influence of the individual variables on the limiting opening time also is analyzed. In conclusion, the necessary technical precautions also are given for the distribution of the high voltage (1000-3000 V). This paper was presented by Engineer M. Zapletal. Orig. art. has: 10 figures and 24 formulas. [Based on author's Eng. abst.] [JPRS: 36,811]

SUB CODE: 09 / SUBM DATE: 10Oct64 / SOV REF: 001 / OTH REF: 002

Card 1/1 LLB

UDC: 621.316.1.04-78

0918 1039

HUDYMENKO, Fedir Sydorovych

[Higher mathematics] Vyshcha matematyka. Kyiv, Vydvo
Kyivs'koho univ., 1964. 379 p. (MIRA 19:1)

HUDZOVIC, Peter, inz.

Method of approximate determination of the excessive regulation
and the duration of the regulation process in linear systems.
Automatizace 8 no.1:18-19 Ja '65.

HUEBER, Josef, inz.

"Zone melting" by William G. Pfann. Reviewed by Josef Hueber.
Sdel tech 11 no.8:319 Ag '63.

HAVLIK, Otto; HUEBNER, Jiri

Results of serological investigation of toxoplasmosis in domestic
and wild animals. Cesk.epidem.mikrob.imun. 9 no.5/6:391-397 J1 '60.

1. Ustav epidemiologie a mikrobiologie v Praze.
(TOXOPLASMOSIS veterinary)

HUNGARY / Chemical Technology. Chemical Products and H-13
Their Application--Ceramics. Glass.
Binding Materials. Concrete

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9063

Author : Huebscher, M.

Inst : Not given

Title : Foam Glass, Its Production and Use

Orig Pub: Epitoanyag, 1958, 10, No 4-5, 109-112

Abstract: The methods of producing foam glass (FG) are indicated: 1) by introducing gasses into molten glass; 2) by introducing intense gas generators into molten glass; 3) by expanding bubbles under vacuum in the molten glass, which contains a large quantity of gases (unclear glass); 4) by mixing glass

Card 1/2

HUECKEL, Stanislaw

Development of research on soil mechanics in Poland. Review
Pol Academy 9 no.1:6-13 Ja-Mr '64

HUECKEL, Stanislaw, prof. dr inz.

A conference on soil and foundation mechanics in Budapest.
Inz i bud 21 no.8:295-296, 3 of cover Ag '64.

1. Technical University, Gdansk.

HUECKEL, Stanislaw, prof.dr. inż.

The anchoring capacity of rigid horizontal elements sunk in sandy soil. Archiw hydrotech 7 no.3:297-314 '60. (KEAI 10:2)

1. Katedra Fundamentowania Politechniki Gdanskiej, Gdansk-Wrzeszcz
(Sand) (Soils) (Building)

HUECKEL, Stanislaw, prof

A brief review of the scientific research in the field of marine and
harbor hydraulics in Poland, *Vodoprivreda* Jug 2 no.7/8:119-123 '59.
(EEAI 10:1)

1. Ecole Polytechnique de Gdansk (Pologne), et V-directeur de
l'Institut Hydrotechnique de l'Academie Polonaise des Sciences, Gdansk
(Poland--Harbors) (Hydraulics) (Ships)

HUECKEL, Stanislaw

"Engineer's hydrology" by G. Remenieras. Reviewed by S. Hueckel.
Archiw hydrotech 8 no.4:623-624 '61.

1. Redaktor Naczelny kwartalnika "Archiwum Hydrotechniki".

HUELLE, H., mgr inz. (Gdansk)

Refrigerating and air-conditioning installations for vessels
fishing in tropical seas. Bud okretowe Warszawa 8 no. 6:
206-207 Jo '63.

HUGET, Marian, mgr., (Gdynia)

Marine insurance. Techn gosp morska 12 no.2:52 '62.

HUGO, Jiri

"Science of plastics for engineers" by C.M.v. Meysenbug.
Reviewed by Jiri Hugo. Stroj vyr 12 no.3:238 '64.

HUGO, J.; JIROUS, M.

Rheology of hard polyvinyl chloride. Chem prum 14 no.2:81-86
F'64.

1. Statni Vyzkumny ustav materialy a technologie, Praha

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
and Their Uses, Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

Author : Hugo, Jiri

Inst : -

Title : Epoxy Resins for Low Current Electrical
Applications.

Orig Pub : Slaboproudy obzor, 1956, 17, No 8, 447-452

Abstract : Cast epoxy compounds UPON 2100 B (I) and
UPON 2200 S (II) were prepared in Czecho-
slovakia. I and II are relatively low
viscosity compositions, consisting of
epoxy resins and a reactive solvent (mono-
meric substance containing a vinyl group).

Card : 1/4

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
APPROVED FOR RELEASE Thursday, July 27, 2000 CIA-RDP86-00513R00051 31(
and Their Uses, Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

Curing of I (initial viscosity 300-500 cps)
and of III (1000-1800 cps) was accomplished
at 20-50°, using 8 percent of the curing
agent and 0.4 percent of the accelerator.
The process was distinctly exothermic. In-
troduction of a filler (quartz, sand or
mica) increased the specific heat, at the
same time decreasing heat accumulation in-
side the cured slab. Presented were chemi-
cal and physical and dielectric properties
of I and II, cured at 20°. Specific impact
strength of I and II was correspondingly
20 and 30 kg/cm². Static bending yield

Card : 2/4

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
and Their Uses. Part IV. Synthetic
Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

strength (kg/cm²) was 420 and 620. Ultimate compressive strength was 490 and 710, while ultimate tensile strength was 260 and 280 kg/cm². The modulus of elasticity was found to be 20,000 and 38,000 kg/cm². Brinell hardness (kg/mm²) was approximately -16 for both resins, while Martens heat resistance was 52° and 57° and Vick's heat resistance was 70° and 78°. Dielectric strength of the resins was 17.2 and 18.2 KV/mm (200), while surface resistance was 3.7×10^{12} and 4.2×10^{12} ohms, and 2.1×10^9 and 4×10^9 ohms after water immersion for 24 hours. I and II

Card : 3/4

CZECHOSLOVAKIA/Chemical Technology. Chemical Products H
APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051 31(
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Polymers. Plastics.

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 52090

shrink loss upon curing than epoxy-poly-
ester compounds. Cracks were not formed
in cast I and II resins upon their sub-
jection to heat cycling between -70 to
120°. -- L. Posin

Card : 4/4

HUGO, J.
Distr: 4E20(j)

Creep characteristics of polyamides. J. Hugo, *Materialy Sbornik* 1958, 315-28 (Pub. 1959) — Measurements on caprolactam polyamides have been carried out at 10-400 kg./sq. cm. and at 0-80°. Test specimens have been subjected to a const. tensile load at atm. moistures of 30-85% and at a temp. of 21°, and the deformation measured as a function of time. Bending tests indicated bending flexures variable with time and permitted the detn. of the so-called creep elasticity modulus at various temps. It was found possible to use the $E_c(t)$ curves for the calcn. of t creep curves, 0-80°. The calcd. curves were identical with the measured ones for stresses up to 100 kg./sq. cm. For ambient temps. or for lower ones, corrections are made for moisture content. P. H. Lieben

ZILVAR, V.; HUGO, J.

The machining of plastic. ~~Jemě~~ Mach opt 5 no.11.329-331 N :60.

1. Statni vyzkumny ustav materialu a technologie, Praha.

HUGO, J., inz.

Mechanical properties of construction plastics. Jemna meck opt
5 no.11:343-346 N '60.

1. Statni vyzkumny ustav materialu a technologie, Praha.

L 08249-67 EWP(j) IJP(o) WW/RM

ACC NR: AP6033024

SOURCE CODE: CZ/0032/66/016/007/0551/0558

AUTHOR: Hugo, J. (Engineer); Jirous, M. (Engineer)

38
B

ORG: State Research Institute of Materials, Prague (Statni vyzkumny ustav materialu)

TITLE: Evaluation of tensile strength of plastic materials

SOURCE: Strojirenstvi, v. 16, no. 7, 1966, 551-558

TOPIC TAGS: plastic, laminated plastic, polypropylene plastic, polyamide, polyvinyl chloride, epoxide, epoxy plastic, stress analysis, mechanical stress, static test

ABSTRACT: The methodology of testing and evaluating results of research on the strenght and behavior of plastic materials exposed to prolonged static stress is explained, and a survey of the results is presented. A group of polyamides, polyvinyl-chlorides, polypropylene, and epoxy vitreous laminates was tested. Semifinished products prepared by VUGPT Gottwaldov were used for the tests. The dependencies and values determined are presented in diagrams. The paper

Card 172

L 08249-67

ACC NR: AP6033024

was presented by J. Koritta, Professor, Engineer, Doctor. Orig. art. has:
19 figures and 11 formulas. [Based on authors' abstract]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 011/

Card 2/2 *pla*

HUHN, P.

"Elementary wave mechanics" by W. Heitler. Reviewed by P. Huhn.
Acta chimica Hung 38 no.2:170-171 '63.

HUHN, P.

Hungarian Technical Abst.
Vol. 5 No. 4 1953

7. Approximative solution of differential equations describing complex chemical processes — *Összetett kémiai folyamatok differenciálegyenleteinek közelítő megoldása* — Z. Szabó, P. Huhn and A. Bergh. (Hungarian Journal of Chemistry — *Kémiai Közlöny* — Vol. 38, 1952, No. 12, pp. 370–379, 9 figs.)

The reaction kinetics of complex chemical reactions were investigated. Instead of simultaneously considering all the chemical processes, only the steps determining the rate of the elementary reactions involved — starting, propagating, branching and rupturing reactions — were taken into account ("four-stage mechanism"). By this method the process may be characterized by two differential equations: one relating to the conversion of the starting material and the other determining the rate of the change in the concentration of the active centres. If the rate constants of the elementary reactions are known, the explicit solution of the differential equations is possible by approximative numerical integration e. g. by the Euler-Cauchy polygon method. If these constants are unknown, it is possible to find through trials a quartet of values by which the solution of the differential equations corresponds with the experimental data. D. Várdonyi

(3)

AF
7-27-51

✓ The mechanism of the gaseous decomposition of C_2Cl_6 studied by Chlorine. Peter Huhn, Leipzig, 1934, and Zoltan Kelen (Univ. Szeged, Hungary), *Magyar Tudományok* (Akad. Kém. Országos Közleményei) 5, 569-188 (1954). The 4-stage mechanism, which was successfully applied to the thermal decomposition of ClO ($\text{Cl} + 47,523 \text{ cal./mole}$), the photochemical reaction of ClO , Cl and OClO ($80,000 \text{ cal./mole}$) was used also for the analysis of stationary, homogeneous explosions, such as the $\text{Cl}-\text{C}_2\text{Cl}_6$ decomposition of C_2Cl_6 . The following scheme (C.A. 45, 8356) was used as the basis of calculations: $\text{Cl}_2 + \text{O}_2 \rightleftharpoons \text{Cl} + \text{ClO} + \text{O}$; $\text{O}(\text{h}\nu) + \text{Cl}_2 + \text{O}_2 \rightleftharpoons \text{Cl}_2 + \text{O}_2$; $\text{O}_2 + \text{ClO} + \text{O} \rightleftharpoons \text{Cl} + \text{M}(\text{h}\nu)$, where the h values are the $\text{Cl} + \text{Cl} + \text{M} \rightarrow \text{Cl}_2 + \text{M}$ of the elementary reactions and M a constant of velocity of the elementary reaction. M may be Cl , Cl_2 or the partner in the triple collision. M may be Cl , Cl_2 or the partner in the triple collision. The proposed scheme of stabilization of radicals is generalized than the principle suggested by Fedenstein, *et al.* (C.A. 26, 5581). The role of ClO_2 in the mechanism of the stabilization may be due to 2 nearly thermoneutral reactions: $\text{ClO} + \text{O}_2 \rightleftharpoons \text{ClO}_2$ ($\Delta H = +0.7 \text{ kcal.}$) and $\text{ClO}_2 + \text{ClO}_2 \rightleftharpoons \text{Cl}_2\text{O}_4$ ($\Delta H = -1.5 \text{ cal.}$). F. K.

Hu AN, P.

V 30. On the calculation of successive equilibria. P.
Hu AN, M. Beck. (Mozav. Khim. Tekhnol.
Vol. 61, 1954, No. 3, pp. 120-131, 9 refs.)

CH

A simple method is given for the determination of the free ligand concentration when the total concentration of the central metal atom is known. By further derivation of this equation a relationship is given for the calculation of the free ligand concentration corresponding to the isoelectric point by using conveniently measurable concentration data. By the interpretation of this equation it became evident that the isoelectric point is unattainable in a solution of an auto-complex without the addition of excess ligand. A quantity of ligands equivalent to the valency of the central ion is bound in the complex compound at the isoelectric point and the existence of a free ligand concentration is necessary to maintain this state. The mathematical equations derived by theoretical considerations were applied to investigate the variations of the salt concentration or the concentration of ions present by using Cd^{2+} salts which are known for their disposition to form auto-complexes.

PM
①

✓ 33. The mechanism of homogeneous chain catalysis and inhibition — Z. Szabó, P. Huhn, A. Bergh (Magyar Kémiai Folyóirat — Vol. 61-1958, No. 5, pp 137-145, 7 figs., 2 tabs.)

OK

The uniform and general mechanism of homogeneous catalysis may be interpreted by the principles of free radical stabilization. It is known that a substance will have opposite effects on the same radicals depending entirely on the relative concentrations of the reactants,

subject to the interaction occurring between the stabilized radicals and the starting material or between the stabilized radicals and the unstabilized radicals. Difficulties encountered in the mathematical formulation of this extremely complex process were solved successfully by employing the principles of the "four-stage mechanism" developed by the authors. To test the validity of the equations obtained by theoretical derivation the nitrous oxide-catalyzed or inhibited decomposition of propyl aldehyde was studied as a function of the nitrous oxide concentration.

PM

(2)

HUHN P.

HUNGARY/Physical Chemistry. Kinetics. Combustion, Explosions. B
Topochemistry. Catalysis.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73279.

Author : T. Berces, P. Huhn.

Inst :

Title : On the Extension of the Concept of the Four Stage
Mechanism. I. General Considerations. II. Application
in the Analysis of an Experimental Kinetic Curve.

Orig Pub: Acta phys. et chem. Szeged, 1957, 3, No 1-4, 95-99;
100-111.

Abstract: I. The system of differential equations describing
the concentration change of active centers (dn/dt)
and initial substances for not-branched chain
reactions, the chain carriers in which are 2 active
centers converting one into the other in succession,

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HUNGARY/Physical Chemistry. Kinetics. Combustion, Explosions. B
Topochemistry. Catalysis.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73279.

was reduced (assuming that the chains were long
enough) to a system of equations (RZhKhim, 1956,
46376) for single center chain reactions proceeding
according to the four stage mechanism; origination,
continuation, branching and chain rupture. Ex-
pressions of dc/dt and dn/dt for the case of thermal
decomposition of SO_2Cl_2 (RZhKhim, 1958, 13796) pro-
ceeding through 2 active centers $[n = n_1 + n_2 =$
 $= (Cl) + (SO_2Cl)]$ were obtained as an example.

II. The system of differential equations describing
the kinetics of the thermal decomposition of
 SO_2Cl_2 (see part I) was numerically integrated
varying the rate constants of elementary stages as

Card : 2/3

Distr: 4E3d

Mechanism of homogeneous chain catalysis and inhibition. Z. G. Szabo, P. Huhn, and A. Bergu (Univ. Szeged, Hungary). *Advances in Catalysis* 9, 343-62 (1957).—The principle of the stabilization of free radicals is used in interpreting the mechanism of catalyzed and inhibited chemical reactions. Math. details are given and applied to data for the decomposition of propylaldehyde and the decomposition of Et_2O as influenced by NO . Paul H. Emmett

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1/1

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[Signature]

Meaning of the influencing factor of the homogeneous chain catalysis and inhibition. P. Hubn and F. Marta (Univ. Szeged, Hung.). *Acta Univ. Szegediensis, Acta Phys. et Chem. [N.S.]* 4, 33-41(1958)(in English).—A relation was established between the half period of conversion $t_{1/2}$ and the influencing factor $F(I)$, defined as the ratio of the stationary chain component of the rate of the influenced reaction to that of the noninfluenced one. $F(I)$ of the thermal decomn. of propylaldehyde catalyzed by NO was calcd. from exptl. $t_{1/2}$ and by choosing by trial suitable values for the characteristic consts. β , k_1 , k_2 for the equation $F(I) = (1 + \beta I) / \sqrt{1 + 2\beta I + k_1 I^2}$, where I is the concn. of the influencing substance, for the data of Staveley and Hinshelwood (*C.A.* 30, 6631⁷) and Szabó, *et al.* (*C.A.* 33, 833c), and of the more detailed work, within NO pressure 0.00-60.00 mm., of the authors. The agreement between calcd. and exptl. $F(I)$ was good. The process is chain-propagated, of the order of about $3/2$. E. M. Vauare.

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11

9

HUNGARY / Physical Chemistry. Thermodynamics.
Thermochemistry. Equilibria. Phase
Changes. Physico-chemical Analysis.

B

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41548

Author : Huhn, P.; Beck, M.T.

Inst : Not given

Title : Some Mathematical Considerations of
Successive Equilibria

Orig Pub : Acta phys. et chem. Szeged, 1958, 4,
No 1-2, 45-53

Abstract : From known equilibrium constants, the
concentrations of $[I^-]$, $[Cd^{+2}]$, $[CdI^+]$,
 $[CdI_2]$, $[CdI_3^-]$ and $[CdI_4^{2-}]$ were cal-
culated for molecular fractions of cad-
mium iodide in a 10^{-3} to 1 M solution.

Card 1/3

HUNGARY / Physical Chemistry. Thermodynamics.
Thermochemistry. Equilibria. Phase
Changes. Physico-chemical Analysis.

B

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41548

Similar calculations were performed for cadmium bromide, cadmium chloride and cadmium thiocyanate solutions. The equilibrium constants for each stage of complex ion formation as well as isoelectric points of several cadmium complexes have been calculated. A method for the calculation of dissociation constants of polybasic acids (based on $[H^+]$ measurements) has been proposed. The concentrations of $[SO_4^{2-}]$, $[HSO_4^-]$ and $[H_2SO_4]$ in 10^{-4} to 1 M H_2SO_4 solutions were computed.

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HUNGARY / Physical Chemistry. Thermodynamics.
Thermochemistry. Equilibria. Phase
Changes. Physico-chemical Analysis.

B

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41548

Finally, ion concentrations in the solutions of oxalic, citric and pyrophosphoric acids were established. The results were presented in tabular form.
-- A. Zolotarevskiy

Card 3/3

HUHN P.

SCIENCE

PERIODICALS: ~~ASTA ZOOLOGICA~~ Vol. 64, No. 7/8 July/Aug. 1958

MAGYAR KEMTARTALYFOLYKÖR

Huhn, P. Discussion about the Bodenstein method in the frame of four-stage mechanism.
p. 263

Monthly list of East European Accessions (EEAI) Vol. 8, No. 2, LC,
February 1959, Unclass.

Distr: 4E3b

7
4-202(100)
Significant points of complex formation function. M. T. Beck and P. Hohn (Univ. Szeged). *Acta. Chim. Acad. Sci. Hung.* 20, 285-311(1959)(in English).—The complex formation function of Bismuth (C.A. 33, 6537^o), \bar{n} , was studied by measuring the stability const. of complex systems like $\text{Ni}(\text{SCN})_n$, CdI_2 , CdBr_2 , HgCl_2 . For the thiocyanate system and CdI_2 the exptl. data obtained agree with those calcul. by Pronaeus (C.A. 47, 8582b) and Leden (C.A. 36, 4044^o). The $\bar{n} - 1/2$ points do not have a definite chem. significance, but the points where \bar{n} is an integer exhibit a definite chem. meaning in that the corresponding complex attains a max. value at this point. R. S. Munro

HUHN, Peter, a kémiai tudományok kandidátusa (Szeged)

An account of my Moscow study trip. Kem tud kozl MTA 15 no.1:91-93
'61. (EEAI 10:6)

1. Szegedi Tudományegyetem Szervetlen és Analitikai Kémiai
Tanszeke, Szeged.

(Russia--Chemistry, Physical and theoretical)

(Hungarians in Russia)

(Academy of Sciences of the U.S.S.R.)

HUHN, Peter, kandidatus; KALLO, Denes, kandidatus

An account of the work of the Working Committee on Catalysis
in 1963. Kem tud kosl MTA 22 no.1:103-104 '64.

COMANESCU, T., ing.; HUMULEA, I., ing.; NITU, V., ing.

Considerations on the choice of the optimum tension utilization for electric drives in the oil extraction industry.
Petrol si gaze 14 no. 9:448-456 8'63.